

Appl. No. : 10/079,077
Filed : February 19, 2002

REMARKS

Claims 1, 3, 5, 7, 9, 10, 15, 16 and 19 have been amended to clarify the invention. Support for the amendment to Claim 1 can be found in the canceled Claim 2. Support for the amendment to Claim 3 can be found in the canceled Claim 4. Support for the amendment to Claim 5 can be found at lines 12-15 of page 24, lines 7-11 of page 29, and lines 18-19 of page 29, for example. Support for the amendment to Claim 7 can be found in Fig. 12, for example. Support for the amendment to Claim 9 can be found in Fig. 17(a) and Fig. 17(b), for example. Support for the amendment to Claim 10 can be found in Fig. 19, for example. Support for the amendment to Claim 15 can be found in Figs. 27-32, for example. Support for the amendment to Claim 16 can be found in Figs. 33-36, for example. Support for the amendment to Claim 19 can be found in Figs. 37-40, for example. Claims 2 and 4 have been canceled without prejudice. Claims 21 and 22 have been added. Accordingly, Claims 1, 3 and 5-22 are pending in this application.

The amendments do not constitute the addition of any new matter to the specification. In addition, a substitute specification has been submitted herewith to overcome the informalities noted by the Examiner. No other changes have been made. As such no marked-up copy of the specification is provided, and no new matter is included. Applicant respectfully requests entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Objection of the Specification

The specification has been objected to because of the informalities set forth in the Office action. A substitute specification has been submitted herewith in which the informalities have been corrected, thereby obviating the objection. Applicant respectfully requests withdrawal of the objection.

Rejection under 35 U.S.C. § 102 and § 103

Claims 1-9 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,092,036 to Sato et al. Claims 10-12 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 2,800,867 to Smith. Claims 16 and 19 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,182,504 to Bernhard. Claims 13 and 14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith. Claim 15 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato et al. Claims 17, 18 and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Bernhard.

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Applicant respectfully traverses these rejections. The claims as amended herein patentably distinguish over the references as explained below.

According to the invention as recited in Claim 1 or 3, the pipe body and the frame are integrated through the wedge bodies that are pressed against the outer surface of the pipe body. Moreover, movements of the pipe body in the pipe axial direction owing to non-averaged force can be blocked through the wedge actions of the wedge bodies. With this arrangement, it is possible to comprise a firm protection work. See page 3, lines 1-7 of the specification.

According to the invention as recited in Claim 5, 16 or 19, by employing a frame being comprised by integrally forming i) a mounting seat portion to be fixed to a supporting portion, ii) a pipe supporting portion rising up from the mounting seat portion, and iii) a rib that is in line with a pipe axial direction, it is possible to block movements of the pipe body in the pipe axial direction and to receive non-averaged force even though big non-averaged force affects a pipe body. It is accordingly possible to comprise a firm protection work.

According to the invention as recited in Claim 7, the pipe body and the frame are integrated through the edge portions and the male screw members that are pressed against the outer surface of the pipe body. Moreover, it is possible to block movements of the pipe body in the pipe axial direction owing to non-averaged force through the pressing actions of the male screw members and the cutting-in actions of the edges with respect to the outer surface of the pipe body. With this arrangement, it is possible to comprise a firm protection work. See page 6, lines 15-23 of the specification.

According to the invention as recited in Claim 9 or 15, since the movement blocking body is comprised with one or more edge portions that are pressed against an outer surface of the pipe body and that are provided in a condition in which they are located at a specified interval in the pipe axial direction, movements of the pipe body in the pipe axial direction owing to non-averaged force can be blocked through the cutting-in actions of either one edge portion with respect to the pipe body even when the pipe body tries to move in any one direction in the pipe axial directions. With this arrangement, it is possible to block movements of the pipe body and to receive non-averaged force. It is accordingly possible to comprise a firm protection work. See page 8, lines 2-13 of the specification.

i) Sato et al.

Sato et al. discloses a pipe junction holder, but not a supporting device for non-averaged force in a pipeline as recited in the present claims. In particular, wedge bodies as recited in

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Claim 1 or 3 are not disclosed or suggested in Sato et al. In the present invention, since the wedge bodies are disposed at specified intervals in the pipe axial direction, while a posture of the wedge bodies is set in a condition such that directions of wedge actions of one pair of wedge bodies adjoining in the pipe axial direction are opposite with respect to each other in the pipe axial direction, the above unexpected advantage can be obtained.

Further, the specific flame as recited in Claim 5 is not disclosed or suggested in Sato et al. In the present invention, by employing the above specific flame, the above unexpected advantage can be obtained.

Furthermore, the features of a fixing mechanism comprising (i) edge portions and (ii) male screw members as recited in Claim 7 are not disclosed or suggested in Sato et al. In the present invention, since (i) edge portions formed on a portion of the inner circumference and (ii) male screw members formed on another portion of the inner circumference face each other, and the male screw members press against an outer surface of the pipe body at their tip end portions when the male screw members are screwed into female screw portions formed in the frame, the above unexpected advantage can be obtained.

Moreover, the features of a fixing mechanism comprising (i) movement blocking bodies and (ii) pressing screw members as recited in Claim 9 or 15 are not disclosed or suggested in Sato et al. In the present invention, since each movement blocking body has one or more edge portions at an interval in the pipe axial direction, and pressing screw members press a top surface of each movement blocking body through the frame, the above unexpected advantage can be obtained.

One having ordinary skill in the art would not have been motivated to conceive the present invention based on Sato et al. Thus, the claims could not be anticipated by or obvious over Sato et al.

ii) Smith et al.

Smith et al. discloses a pipe performing clamp, but not a supporting device for non-averaged force in a pipeline as recited in the present claims. In particular, the features of a frame and a fixing mechanism as recited in Claim 10 are not disclosed or suggested in Smith et al. The frame comprises (i) a first receiving portion which is a half of the frame and (ii) a second receiving portion which is another half of the frame. The first receiving portion and the second receiving portion is detachable. The fixing mechanism comprises arc-shaped edge portions formed on the first receiving portion and the second receiving portion for receiving an outer

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surface of the pipe body in a circumference direction. Smith et al. fails to teach the above significant features. One having ordinary skill in the art would not have been motivated to conceive the present invention based on Smith et al. Thus, Claim 10 and claims dependent thereon could not be anticipated by or obvious over Smith et al.

iii) Bernhard et al.

Bernhard discloses a balanced snubber apparatus, but not a supporting device for non-averaged force in a pipeline as recited in the present claims. In particular, the specific flame as recited in Claim 16 or 19 is not disclosed or suggested in Bernhard et al. In the present invention, by employing the above specific flame, the above unexpected advantage can be obtained. One having ordinary skill in the art would not have been motivated to conceive the present invention based on Bernhard et al. Thus, Claims 16 and 19 and claims dependent thereon could not be anticipated by or obvious over Smith et al.

Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 102(b) and § 103(a).

New Claims 21 and 22

New Claim 21 recites the distinct features of Claim 16, and further recites that the ring body is two-split in a radial direction and the pair of separated ring bodies are coupled together by a coupling means. Such ring body is not disclosed in Bernhard et al. Accordingly, Claim 21 is patentable for this additional reason as well.

New Claim recites the distinct features of Claim 19, and further recites that the belt body is two-split in a radial direction and the pair of separated belt bodies are coupled together by a coupling means. Such belt body is not disclosed in Bernhard et al. Accordingly, Claim 22 is patentable for this additional reason as well.

CONCLUSION

In light of the Applicant's foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Respectfully submitted,
KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: July 10, 2003

By:



Daniel E. Altman
Registration No. 34,115
Attorney of Record
Customer No. 20,995
(949) 760-0404

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